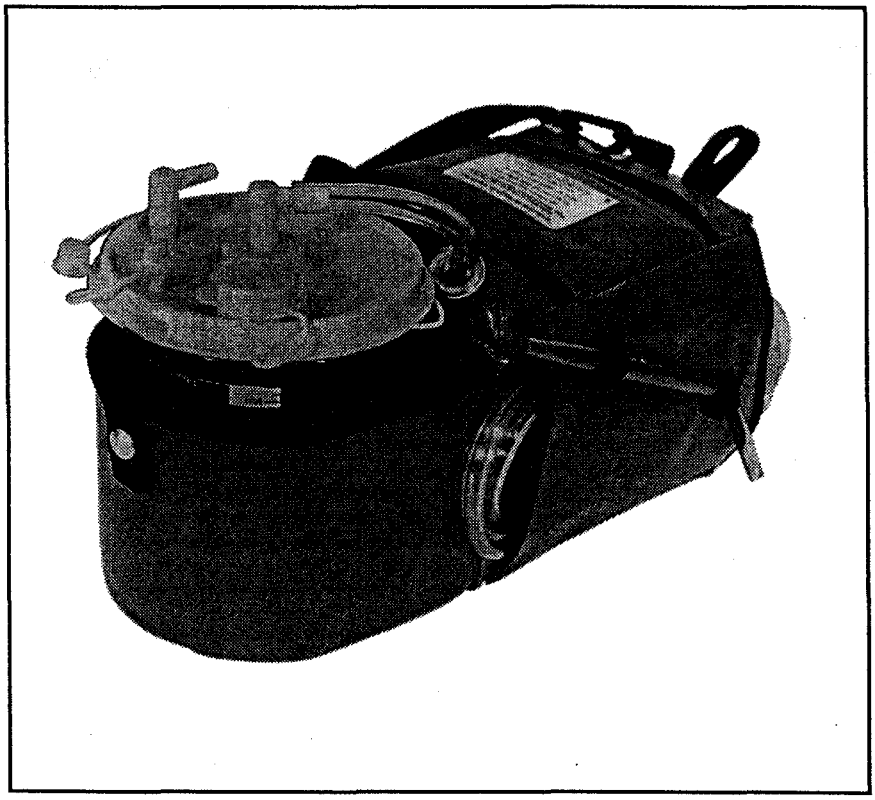
OPERATING INSTRUCTIONS
AND
MAINTENANCE MANUAL

S-SCORT® II

MODEL 15005A-W



SSCOR, INC.

11064 Randall Street
Sun Valley, CA 91352
U.S.A.
Tel 818/504-4054
Tel 800/434-5211
Fax 818/504-6032

CAUTION - NOTICE

FOR DC VOLTAGE ONLY.
DO NOT CONNECT DIRECTLY TO 115V AC.

A suction tip with a thumb control should be used routinely during the procedure.

Federal law restricts this device to sale, distribution, and use by or on the order of a physician, emergency medical technician, or other medical practitioner.

Operator should be thoroughly familiar with these operating instructions before using.

Do not use in the presence of flammable agents or anesthetics.

This S-SCORT II Model 15005A has no batteries included and SSCOR assumes the purchaser will use and maintain the same batteries and battery procedures on this unit which are used on the LIFEPAK 5 defibrillator/monitor. SSCOR assumes no responsibility for the performance of the batteries.

The shut-off valve in the canister lid will close down when canister is filled with fluids. See "Canister Instructions", Page 15.

Install a new canister before testing for negative pressure over 300mmHg to minimize possibility of implosion, which can occur in instances where a canister is aged or damaged.

Table of Contents

Caution-Notice	**2**
General Description	**4**
Important Features	**5-7**
Operating Instructions	**8**
Warning	**9**
Maintenance	**10**
Warranty	**10**
Trouble Shooting	**11**
General Specifications	**12**
Battery Installation and Removal	**12-13**
Cleaning Instructions	**14**
Electrical Diagram	**14**
Canister Instructions	**15**
Pump Drawing and Parts List	**16**

S-SCORT® II Model 15005A-W

Battery Operated - Portable Suction Pump

To be used with batteries for the LIFEPAK 5 Defibrillator/Monitor

U.S. Patent D328642

© 1995 SSCOR, Inc. S-SCORT, HI-D and Big Stick are registered trademarks of SSCOR, Inc.
LIFEPAK is a registered trademark of the Physio-Control Corporation.

GENERAL DESCRIPTION

S-SCORT® II Model 15005A-W

S-SCORT II is a portable, 12V DC battery operated suction pump for constant suctioning during resuscitation emergencies.

"It is powerful enough to provide an airflow of more than 30 liters/minute at the end of the delivery tube and a vacuum of more than 300mmHg when the tube is clamped."[1]

The Model 15005A-W is powered by a battery for the LIFEPAK® 5 defibrillator/monitor capable of driving the unit for 15 to 20 minutes when the battery is fully charged. A receptacle for a spare battery is conveniently located next to the active battery for easy replacement when more suctioning time is needed. This unit does not have batteries included when it is shipped by SSCOR, Inc. SSCOR does not sell replacement batteries.

S-SCORT II is designed to provide instant, effective suctioning, independent of external sources of power.

S-SCORT II can be pre-set to be activated immediately upon reaching the distressed patient, with no set up time required during the first few critical minutes of the code.

Suction power is controllable for those instances when full power would be considered harmful to the patient.

All controls are clearly labeled and easily accessible.

S-SCORT II is equipped with a disposable collection canister which features a bacterial filter to screen airborne particulates and a mechanical shut-off valve to prevent fluid overflow.

[1] JAMA, October 28, 1992. Vol. 268, No. 16. Page 2203
"Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiac Care"

IMPORTANT FEATURES

S-SCORT® II Model 15005A-W

PUMP

High performance diaphragm vacuum pump with ball bearing construction. Requires no maintenance under normal conditions. Oil-less, requires no lubrication and produces oil free air.

REGULATOR

Provides a method for the user to adjust negative pressure in one of two possible positions. Max. 525 mmHg (± 10%), Min. 125 mmHg (±10%) at sea level. Vents to atmosphere to prevent accumulation of negative pressure in excess of the predetermined setting.

Note- Atmospheric pressure and altitude can affect negative pressure readings by 20% in extreme situations.

ELECTRICAL

A wired receptacle for a battery for the LIFEPAK® 5 defibrillator/monitor is located within the unit along with an unwired receptacle for a spare battery. No batteries are included with this unit and the purchaser has the sole responsibility for furnishing and maintaining the batteries according to the instructions furnished by the battery manufacturer. A fully charged battery will power the S-SCORT II for 15-20 minutes of continuous running time. Replacement batteries should be ordered from your existing battery supplier.

A power cable, included, can be used to connect the vehicle power to the S-SCORT II. The battery can be removed while the S-SCORT II is connected to the vehicle, or if it is not removed, it will be protected from the vehicle electrical system by diodes.

CARRYING CASE

Fire Retardant "Stayclean" vinyl coated nylon with interchangeable hand carrying strap or adjustable shoulder strap.

CANISTER COLLECTOR

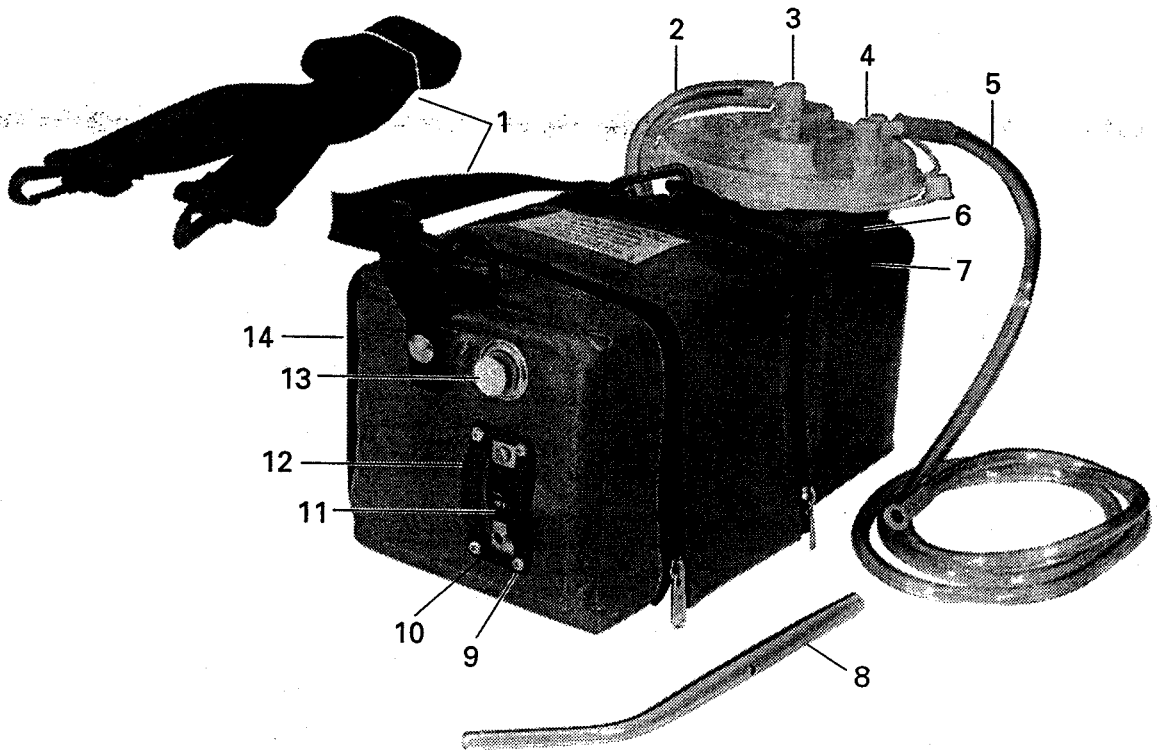
1200cc capacity. A bacterial filter screens airborne particulates and a shut-off valve prevents fluid overflow.

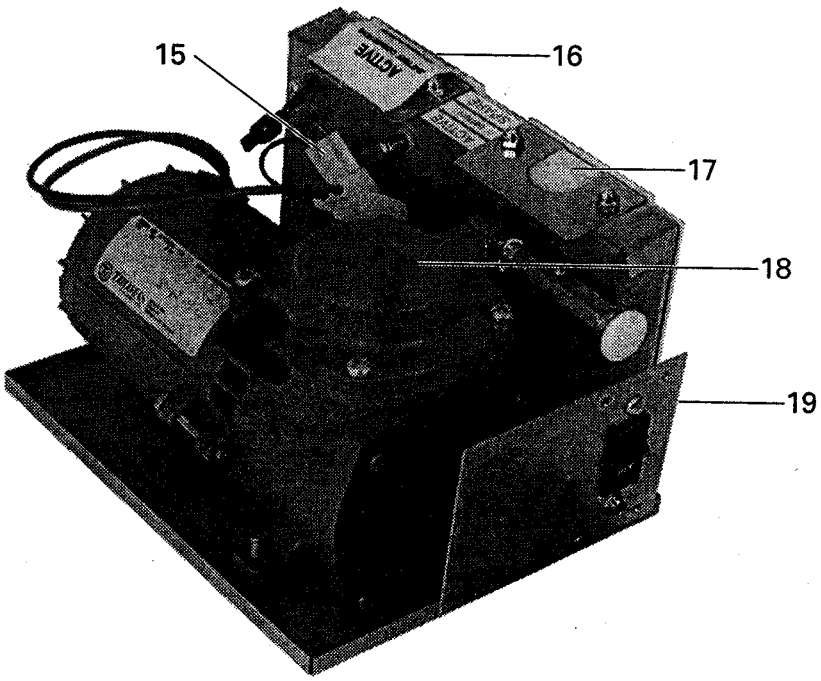
PERFORMANCE

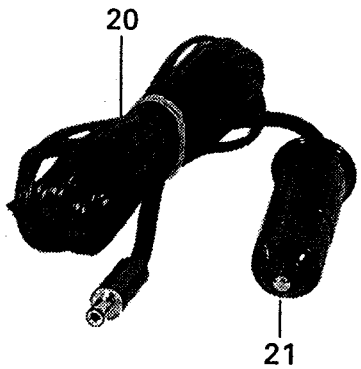
The S-SCORT II exceeds JAMA and KKK standards.

IMPORTANT FEATURES

S-SCORT®II Model 15005A-W







IMPORTANT FEATURES

S-SCORT® II Model 15005A-W

KEY NO.	COMPONENT	FUNCTION
1	Carrying Strap	2 way: handle or shoulder strap
2	Vacuum Line	Connects regulator to canister
3	Vacuum Port	Connects canister to vacuum line
4	Patient Port	Connects canister to patient tube
5	Patient Connecting Tubing	9/32" I.D., SSCOR Part #43200
6	Disposable Canister	1200cc, SSCOR Part #48041
7	Canister holder	Washable, closed cell foam
8	Vented Suction Tip	HI-D "Big Stick®" Large Bore Suction Tip with thumb control. SSCOR Part #44241
9	Service Screws	To remove electrical circuitry
10	Receptacle	Accepts power cable
11	On/Off Switch	Turns unit on or off
12	Switch plate	
13	Regulator Control	Adjusts Negative Pressure
14	Vacuum tube strap	To store patient connecting tubing.
15	Battery Connection	Quick Disconnect
16	Battery Holder A	Holds active battery and supplies electrical power
17	Battery Holder S	Holds spare battery and has no electrical connections
18	Pump	Provides Vacuum source
19	Protector Plate	Protects electrical connections
20	Charging Cable	Connects unit to vehicle for alternate power
21	Cigarette Lighter Adapter	Connects power cord to vehicle

OPERATING INSTRUCTIONS

S-SCORT® II Model 15005A-W

Daily Inspection: Establish a daily checklist to assure good performance of the equipment.

1. Confirm the batteries are charged.
2. Run the unit .
3. Check for vacuum.
4. Check the regulator.

NOTICE: These steps should be followed in the routine check list. Component Key Numbers are indicated within ( )s.

1. Place two fully charged batteries, one in each of the two receptacles (16,17) which are immediately inside the zippered compartment. Side A (labeled "ACTIVE") is integrated into the electrical system. Side S (labeled ("SPARE") holds a fresh battery until needed. After about 20 minutes running time the "A" battery will be depleted and the two batteries will have to be exchanged.

The Charging cable (20) will connect the unit to the vehicle and run the pump with no batteries inserted and/or in parallel with the battery to extend the running time. Diodes protect the battery from the vehicle.

2. Negative pressure on Model 15005A-W is controlled by a two position regulator (13). When fully depressed (pushed toward the pump), the negative pressure exceeds 525mmHg (± 10%). To reduce negative pressure, pull the regulator straight out to the stop. In this position, the negative pressure will be 125mmHg (± 10%).

3. Attach patient connecting tube (5) to patient port (4) on the canister (6). Use 9/32" I.D. tubing.

4. Turn On/Off switch (11) to On.

5. Occlude the end of the patient connecting tube and keep it occluded for 10 seconds. Release the occlusion and observe evidence of negative pressure.

If the pump is running and no negative pressure is observed, check to be sure the lid on the disposable canister is tight and vacuum connections are secure.

6. Dispose of the canister after use.

CAUTION - Always turn pump switch to "Off" as soon as possible after the procedure. Rechargeable batteries will short out if they continue to discharge after they have reached the point where they do not have sufficient power to drive the pump. Be sure the switch is in the "Off" position until needed.

WARNING

S-SCORT® II Model 15005A-W

1. For use by Medical Personnel trained in suctioning techniques and in the use of Medical Suction Equipment.

2. The S-SCORT II produces a powerful vacuum. Be sure the regulator is in the low setting when suctioning children and intubated patients.

3. Use a suction catheter with a thumb control when suctioning children and intubated patients. Use a thumb control on all suction tips.

4. Explosion Hazard: Do not use in the presence of flammable anesthetics.

5. Refer all servicing of electrical systems to qualified service personnel.

NOTE: DO NOT ATTEMPT TO CHANGE THE ELECTRICAL SYSTEM. THIS UNIT OPERATES ON 12-14V DC ONLY.

6. The mechanical shut-off in the canister is designed to close when the canister is filled with fluids. If the vacuum shuts down, empty contents immediately or replace the canister with a new one. Spare canisters are available from SSCOR, Inc. or your dealer.

7. Be sure the lid on the canister is tightened securely to prevent a loss of vacuum at a critical time

8. Do not use the S-SCORT II to suction neonates.

9. Recycle batteries after each use.

10. Install a new canister before testing for negative pressure over 300 mmHg to minimize possibility of an implosion which can occur in instances where a canister is aged or damaged.

MAINTENANCE

S-SCORT® II Model 15005A-W

Maintenance is minimal, but the pump is designed to suction fluids which can easily contaminate the system if they are not removed immediately.

Immediately following the code procedure, remove the collection canister, dispose of the canister according to established procedure and replace with a new one.

If the code procedure produced an excessive quantity of fluids, check the vacuum line for evidence of moisture. Replace vacuum line if moisture is evident (Use 5/16" I.D. tubing).

If the vacuum line has filled completely, it is possible that fluids have reached the pump. Your engineering department can remove the head of the motor to check for moisture. If it is excessive, the pump should be decontaminated and returned to the factory for overhaul (see page 16 for pump diagram).

Maintain batteries and recycle them in accordance with the battery manufacturers instructions. Recharge the batteries according to the recommendations of the battery manufacturer.

Do not attempt to repair electrical wiring; return the unit to the factory for repair.

If the Regulator Stem is difficult to pull out, lubricate the stem with a Numatics Lubricant.

Cleaning -- The vinyl case can be wiped down and the closed cell foam insert can be machine washed. Remove electrical wiring and all working components before submersion in water (see page 14).

For technical assistance, call . . . . (800) 434-5211

WARRANTY

S-SCORT® II Model 15005A-W

SSCOR warrants that each new SSCOR product is free from defects in material and workmanship under normal use and service for a period of one year from date of purchase. If returned to SSCOR, the factory will arrange for repairs or replacement within the terms of the warranty. The defective instrument should be returned decontaminated and properly packaged, postage prepaid. Loss or damage in return shipment to the factory shall be the purchaser's risk.

The warranty shall not apply to any SSCOR product which has been repaired by anyone other than an authorized SSCOR representative, or altered in any way so as, in SSCOR's judgment, to affect its safety or efficacy, nor which has been subject to misuse, negligence, or accident, nor which has had the serial number altered, effaced or removed. Neither shall this warranty apply to any SSCOR product which has been connected otherwise than in accordance with the instructions furnished by SSCOR.

This warranty is in lieu of all other warranties expressed or implied and of all other obligations or liabilities on SSCOR's part, and SSCOR neither assumes, nor authorizes any representative or other persons to assume for it, any other liability in connection with the sale of SSCOR products.

Batteries and disposable collection canisters are excluded from this warranty.

TROUBLE SHOOTING

S-SCORT® II Model 15005A-W

MALFUNCTION	POSSIBLE CAUSE	CORRECTIVE ACTION
Unit does not function when switch is in the "ON" position	Loose Connections	Tighten Connections
	Battery discharged	Recharge Battery
	Battery defective	Replace Battery
	Poor vehicle connection	Check output of vehicle
Unit does not suction when pump is running	Vacuum line loose	Check connections
	Canister defective	Replace Canister
	Canister lid is not tight	Resecure Canister lid
	Thumb vent on suction tip is not occluded	Occlude with thumb
Pump is sluggish	Residual materials have collected in the pump head	Refer to qualified service personnel for cleaning
	Battery is unable to retain a charge	Replace battery
	Loose connections	Check connections
System shuts down while suctioning heavy particulate matter	Vacuum line clogged at canister lid	Remove connector or canister lid and loosen obstruction
	Float valve has closed	Loosen float valve, empty contents, or replace canister (see Page 15)
Regulator Stem is difficult to pull	Stem requires lubrication	Lubricate stem

GENERAL SPECIFICATIONS

S-SCORT® II Model 15005A-W

CHARACTERISTICS	SPECIFICATIONS
Size	14"L X 7"H X 7"W
Weight	10 pounds (batteries included)
Pump	12V DC oil-less diaphragm. 5.0 Amp. permanent magnet motor. Powers to 525mmHg (± 10%) and 30 LPM.
Regulator	Controls Negative pressure
Power Source	Batteries for the LIFEPAK 5 defibrillator/monitor and/or direct connection to vehicle.
Switch	On/Off rocker
Collection Canister	1200cc SSCOR Part #48041
Patient Connecting Tubing	Vinyl tubing 9/32" ID, 72"L SSCOR PART #43200
Suction Tip	HI-D "Big Stick®" Large Bore Suction Tip with thumb control. SSCOR PART #44241
Batteries	Not furnished by SSCOR, Inc.

BATTERY INSTALLATION AND REMOVAL

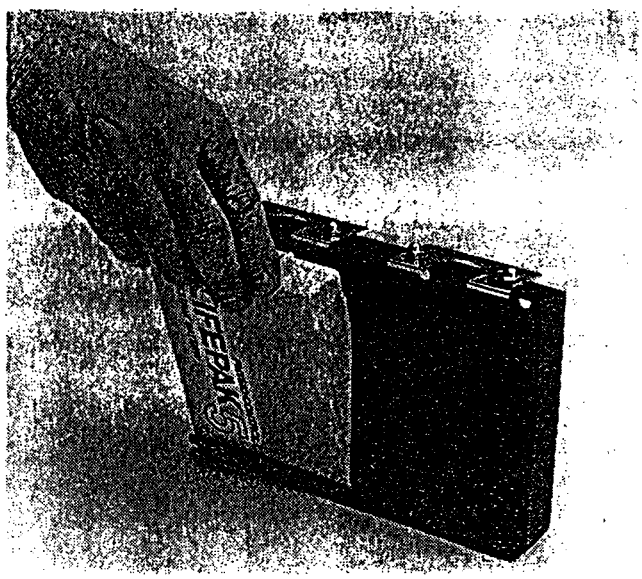
S-SCORT® II Model 15005A-W

There are two battery holders, side by side, for the batteries. The one on the right has the electrical connections to the vacuum pump--it is marked "ACTIVE". The holder on the left has no electrical connections and it is marked "SPARE". Fully charged batteries should be placed in each holder and when the active battery is depleted it should be exchanged with the spare battery.

Hold the battery in a vertical position with the electrical receptacles up and facing toward the pump. Place the bottom of the battery into the channel at the bottom of the battery holder and snap close the top of the battery into the battery holder. An audible "click" will indicate the battery is correctly placed into the battery holder. Test the placement by pulling back on the battery. It should not move until the plastic battery clip is depressed.

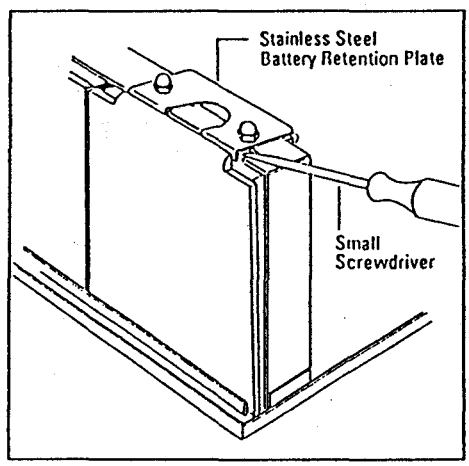
For extended running time, such as transport, the S-SCORT may be connected to the vehicle for continuous operation. Use power cable(20).

See next page for battery installation picture.

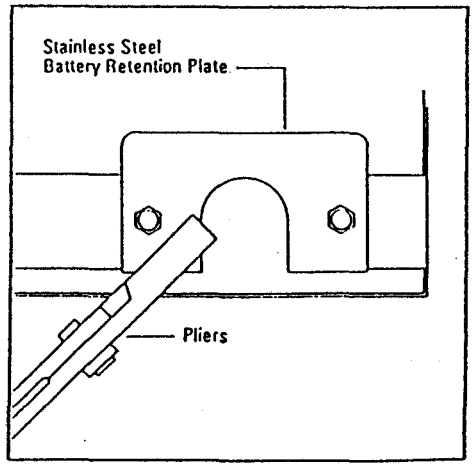


If you experience difficulty removing a battery from the S-SCORT II, please follow these two easy steps.

Step 1. Place the blade of a small screwdriver (3/16" width is ideal) under one side of the stainless steel Battery Retention Plate between the acorn nut and the bent edge of the plate. Slightly raise the edge of the plate. If necessary, repeat the procedure on the opposite side of the plate until the battery can be easily removed.



Step 2. With the battery removed, adjust both sides of the Battery Retention Plate. Using pliers, slightly raise the bent edges. Adjust the bent edges of the plate so the battery remains secure but can easily be removed.



DISASSEMBLY TO WASH COMPONENTS WITHOUT DAMAGE TO ELECTRICAL CIRCUITRY

S-SCORT® II Model 15005A-W

Refer to Parts Diagram Page 6 and Electrical Diagram on this page

REMOVING THE PUMP FROM THE CASE FOR SERVICE OR TO WASH THE CASE:

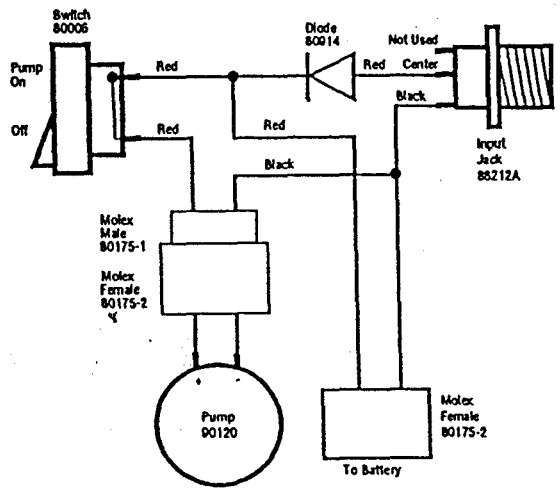
Remove the retention screw from the white plunger in the regulator (13), snap off the C clip on the regulator and pull the vacuum connecting tube back through the grommet which goes to the canister.

Remove four screws from switch plate (12) and lift entire assembly up and out of the case.

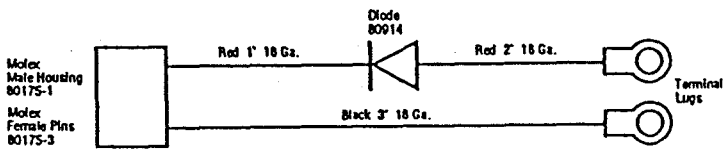
To reassemble: Slide the entire assembly back into the case so that the two position regulator feeds through the brass grommet of the case. Replace the electrical circuitry . Line up the outside electrical switch plate and the interior electrical protection plate with the four screw holes in the fabric. Reinstall the flat protector plate and attach the switch protector plate with 6-32 screws. Reconnect electrical to the matching Molex connectors, replace the white plunger into the brass regulator, reinsert the retention screw into the stem, replace the C clip on the end of the regulator and on the outside of the case.

Replace foam canister holder and all disposables.

Main wire harness



Battery wiring harness



DISPOSABLE CANISTER

S-SCORT® II Model 15005A-W

The S-SCORT II utilizes a single patient suction canister.

The canister features a positive shut-off valve and foam guard which will close upon contact with foam or fluid. In addition, a clinically proven Bacterial filter screens out potentially hazardous airborne particulates.

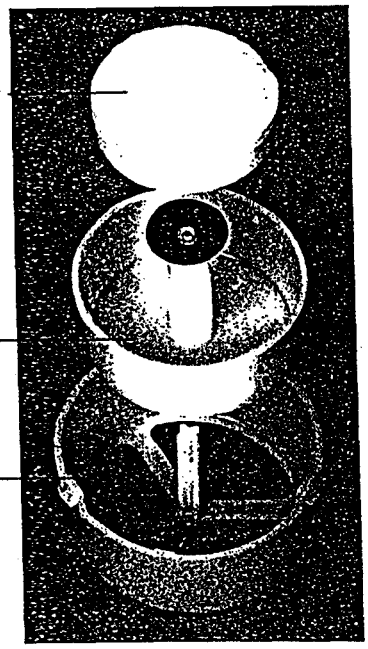
WARNING

The mechanical valve in this lid will close when the canister is filled with fluids. Contents will have to be emptied in order to open the valve, or, preferably, the canister should be replaced with a new one. The bacterial filter will lose effectiveness after it has been exposed to fluids.

The canister must be in an upright position to collect fluids.

Order new canisters from SSCOR 800/434-5211 or your dealer. SSCOR Part #48041.

Install a new canister before testing for negative pressure over 300 mmHg to minimize possibility of implosion, which can occur in instances where a canister is aged or damaged.



Aerostat Hi-Flow Bacterial Filter
Clinically proven filter, 99.99% DOP rated (range 99.95), effectively filters aerosolized microorganisms and particulate matter with an air flow in excess of 1.9 cfm at 180mm mercury, and 0.7 cfm at less than 50mm mercury.

Positive Shut-Off Valve
Closes immediately when fluid reaches top. Soft gasket on float seals tight to prevent fluid overflow.

Foam Guard
Keeps float valve securely in place. Prevents premature shut-off.

DRAWING AND PARTS LIST

FASTVAC™ MODEL 15005A

MODEL 107CDC18, 107CDC18/24, 107CDC20 & 107CDC20/24 PARTS LIST

Item No.	Part No.	Description	Qty.
1	614361	Motor End Cap Assy.	1
2	625260	Screw - M.E.C.	2
3	602492	Motor Shaft, & Magnet Assy.	1
4	625059	Screw - Sleeve to Hsg.	2
5	614609	Front Cover	1
6	625266	Screw - Front Cover	4
7	607139	Connecting Rod	1
8	625114	Screw - Connecting Rod	1
9	632264	Flush Seal Pipe Plug	2
10	625516	Lockwasher	2
11	627093	Brush & Lead Wire Assembly	1
12	625407	Screw - Brush Assembly	2
13	617045	Valve Keeper	2
14	621102	Valve Flapper	2
15	654129	Valve Plate	1
16	625141	Screw - Hold Down Plate	4
17	660131	Head	1
18	625444	Screw - Head	4
19	654649	Diaphragm Hold Down Plate	1
20	608148	Diaphragm	1
21	645374	Eccentric & Bearing Assembly	1
22	625244	Set Screw - Eccentric	1
23	608082	Armature Fan & Bearing Assy.	1
24	660662	Housing	1
25	625160	Screw - Flapper	2
26	615403	Spacer - Eccentric	1
27	633439	Gasket - Valve Plate	1
28	625548	Screw - Valve Plate	4
29	660763	Filter Body (H.S.)	1
30	660767	Filter Body Cap (H.S.)	1
31	641834	Filter - Foam (H.S.)	1

Model 107CDC18

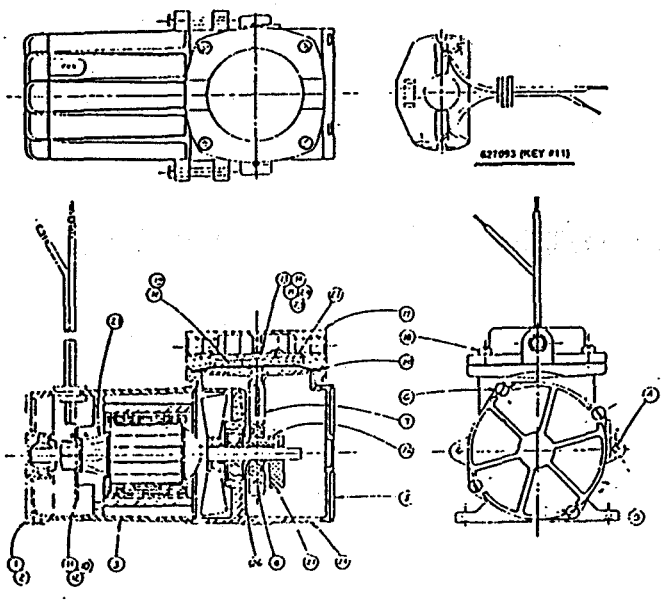
Item	Delete:	Add:	Description	Qty.
21	645374	645373	Ecc. & Brg. Assy.	1

Model 107CDC18/24

Item	Delete:	Add:	Description	Qty.
21	645374	645373	Ecc. & Brg. Assy.	1
23	608082	608484	Armature Fan & Brg. Assy.	1

Model 107CDC20/24

Item	Delete:	Add:	Description	Qty.
23	608082	608484	Armature Fan & Brg. Assy.	1



MODEL 107ADC18, 107ADC20 & 107ADC11 PARTS LIST

Item No.	Part No.	Description	Qty.
1	602492	Motor Shaft Hsg. & Magnet	1
2	608082	Armature Fan & Bearing Assy.	1
4	614361	Motor End Cap Assembly	1
5	625260	Screw - Motor End Cap	2
6	625516	Lockwasher	2
7	615403	Bearing Spacer	1
8	625114	Cap Screw - Connecting Rod	1
9	660662	Housing	1
10	641007	Filter	1
11	627093	Brush & Lead Wire Assy.	1
12	616124	Filter Screen	1
13	607142	Connecting Rod	1
14	614612	Front Cover	1
15	625266	Screw - Front Cover	4
16	608148	Diaphragm	1
17	660735	Head	1
18	625444	Screw - Head	4
19	617045	Valve Keeper Strip	1
20	625160	Screw - Valve Flapper	1
21	645374	Eccentric & Bearing Assy.	1
22	625244	Set Screw - Eccentric	1
23	654548	(Inlet) Valve Plate	1
24	625141	Screw - Valve Plate (Inlet)	4
25	633129	O-Ring - Valve Plate	1
26	633525	Umbrella Valve	1
27	625054	Screw - Motor Sleeve to Hsg.	2
28	632264	Flush Seal Pipe Plug	2
29	654632	Intake Valve Plate	1
30	630017	Screw - Filter	1
31	625407	Screw - Brush Holder	2
32	621102	Valve Flapper	1
33	623048	O-Ring Valve Plate Screw	4
34	625548	Screw - Valve Plate (Exhaust)	4

Model 107ADC18

Item	Delete:	Add:	Description	Qty.
21	645374	645373	Ecc. & Brg. Assy.	1

Model 107ADC11

Item	Delete:	Add:	Description	Qty.
21	645374	645373	Ecc. & Brg. Assy.	1